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AUTHOR Riley, Richard W.
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ABSTRACT

The U.S. Secretary of Education addresses the problem of school building deterioration in the United States, as reported by the General Accounting Office; and governmental responses to funding modernization efforts. The report lists three conditions necessary for designing new schools: school design should support an economy in which learning is a lifelong process; the design should be flexible to allow for technological and educational changes; and school designing should reflect political and economic realities. Use of the Qualified Zone Academy Bonds initiative to extend federal support to communities with school buildings that are too old to renovate is offered as a potential solution. (GR)

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CEFPI
The School Building Association

ISSUETRAK 1

A CEFPI Brief on Educational Facility Issues

Topic : School Construction and Design

Issue Tracker: Richard W. Riley, U.S. Secretary of Education

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CEFPI BRIEF

Communities all across our nation are struggling to build, renovate, and modernize schools. School construction is necessary to ensure that our children are safe, to accommodate rising enrollments, to help reduce class sizes, to make sure schools are accessible to all students, and to modernize buildings so children can prepare to succeed in the 21st century. As educational facilities planners, you're trained to help communities create high-quality learning environments for students. But in too many cases, financial obstacles to school construction prevent communities from providing children with an adequate learning environment.

A 1995 study from the General Accounting Office verifies that the problem is widespread. According to the study:

- two-thirds of schools needed repairs and renovations to improve accessibility for disabled students or address health and safety problems such as asbestos, lead in water or paint, materials in underground storage tanks, and radon
- half of America's schools reported unsatisfactory environmental conditions such as poor ventilation, furnace problems, inadequate lighting, or insufficient physical security
- 40 percent of America's schools needed to repair or replace buildings features such as a roof or plumbing
- one-third of America's schools, serving 14 million students, needed extensive repair and building replacements
- 30 percent of rural districts, 38 percent of urban districts, and 29 percent of suburban districts have at least one building needing extensive repair or total replacement

Other sources support the GAO report's findings. A 1999 report from the National Center for Education Statistics noted that the average public school in America is 42 years old, and school buildings begin rapid deterioration after 40 years. The American Society of Civil Engineers has named school infrastructure as the most pressing infrastructure need in America today. And a new study from the National Education Association suggests there is substantial unmet need today – even greater than in 1995 – for school renovation and construction.

With school enrollment increasing, this problem is not going to go away. In August of 1999, the U.S. Department of Education released *No End in Sight*, a special report on increasing student enrollment and the so-called "baby boom echo." The report found that a record 53.2 million children are enrolled in elementary and secondary schools today.

In addition, schools will continue to need renovations to ensure that students have access to educational technology and the Internet. Electrical lines that are sufficient to keep florescent lights going may not be good enough to run classroom computers. A power surge can turn a computer station into a box of worthless wires and chips. A leaky roof can do thousands of dollars of damage to equipment and deny young people access to the technology they need to know to succeed in the 21st century.

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The Duke Ellington School for the Arts in Washington, DC, provides an example of the importance of school infrastructure. In 1994, Stevie Wonder and Motown Records offered to supply the school with equipment for a new recording studio. Eventually, though, the offer was withdrawn because the room's leaky ceiling could have led to water damage and the destruction of the recording equipment.

Similar problems prevent schools from making the most of E-Rate discounts. The E-Rate program provides significant discounts for schools, especially those in poor communities, to help them obtain Internet access, high-speed data connections, and other services to help ensure that all students have access to technology.

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However, poor infrastructure can undermine the benefits of E-Rate discounts. Older schools are more likely to have asbestos problems and inadequate electrical wiring. These conditions make construction difficult, especially renovations to provide access to technology and the Internet. A report from the Benton Foundation found that, while the E-Rate had helped urban schools expand Internet access, fundamental school facilities flaws, particularly in the poorest schools and those with the most outdated infrastructures, were a major problem that sometimes undermined implementation.

School officials across the country are making difficult financial decisions – whether to fix a leaky roof or buy new textbooks or rewire classrooms for Internet access. These decisions are best left to state and local officials, but there has always been a supportive Federal role in school construction.

Historically, states and communities have issued bonds with interest that is exempt from federal income tax. Because the bondholders do not have to pay taxes on the interest, the community can sell the bond at a lower interest rate. In current market conditions, these savings amount to about one-third of the interest costs. In this limited way, traditional federal support has been somewhat effective in helping communities design, build, and maintain good school facilities.

Thanks to the leadership of President Clinton and Vice President Gore, we've taken a step beyond the traditional federal support for school construction. In 1996, the President called for an increased federal role in school construction; in 1997, Congress responded by creating Qualified Zone Academy Bonds (QZABs), targeted tax-credit bonds for school renovation and other specific purposes.

With QZABs, local governments no longer have to pay interest to bondholders. The community benefits because interest payments are costly, typically 50 percent of the cost of a bond. A tax-credit bond is a better value for the community because the federal government would pay all of the interest, which translates to about three times as much federal support as bonds with the traditional tax-exempt status.

In Granger, Texas, school officials used QZABs to help finance an addition to the town's only school building, providing students with four classroom/computer lab combination rooms, a distance learning center, a new cafeteria, and a library that will be open to the community as well as students. In Drake, North Dakota, school officials used a $200,000 QZAB for an emergency renovation when the furnace in its only school was condemned and had to be shut down. Memphis, Tennessee, is using a QZAB to renovate five high schools, and Chicago is transforming an armory into an ROTC high school, Dr. Terry Bradley, Deputy Superintendent of the Clovis Unified School District in California, calls QZABs "one of the most user-friendly Federal or state programs in existence."

QZABs have worked well and offered communities a financing option that makes it possible for them to strengthen their schools. But Congress has balked at other measures to support school construction and renovation. In this year's budget, President Clinton has proposed several new measures to help communities build or repair schools.

The President has asked Congress to expand QZABs to offer the same tax-credit bonds for building new schools, which so many communities desperately need. Congress has already decided that helping communities renovate schools is worthwhile. This expanded proposal would extend federal support to communities with school buildings that are simply too old to renovate.

The President has also proposed a new tax-credit bond initiative to modernize up to 6,000 schools. The School Modernization Bonds work like QZABs, but a larger number of communities are eligible for this program. And School Modernization Bonds go further than QZABs, covering major renovations and new school construction.

Many communities will benefit if Congress passes the President's School Modernization Bonds proposal. However, the financial condition of some school districts prevents them from issuing bonds. Yet children in financially stressed communities also deserve safe school buildings, access to technology, and facilities that reflect the importance of education to our nation.

To help these communities, the President has proposed a package of loans and grants to school districts with the greatest need. Through grants and interest-free loans, federal funds would leverage state and local funds to support nearly $6.7 billion in school renovation. Over five years, this federal-state-local partnership would make a significant difference in the physical condition of our nation's schools.

These measures can help communities finance school construction and renovation, but students will not be well served if new and reconstructed schools are designed like the 50-year-old buildings they replaced. Our nation needs well-designed elementary and secondary schools that inspire our children to become literate, productive citizens. In June of 1998, a group of architects, planners, school board members, teachers, and representative from federal agencies met to review the research, share their experiences, and consider best practices in school design. The participants agreed that certain conditions should be recognized as a basis for designing new schools.

First, school design should support an economy in which learning is a lifelong process. Clearly, the increasing rate of technological change makes the modern workplace dynamic and demanding. In medicine and auto mechanics, in education and architecture, workers will need to adapt to new technologies throughout their careers. We should design schools that can provide training for adults in the community.

Second, school design should be flexible. Today, Americans can go to the local mall and buy more computing power than we could even dream of 20 years ago. Today, we communicate via e-mail, and the world's libraries and museums are accessible through the World Wide Web. Tomorrow…who knows? We can't build schools today that will reflect precisely the needs of students in 20 years. Therefore, we must periodically review our ideas about school design to make sure they are current. Also, our current designs should be flexible, targeted at our present-day needs, but not so rigid as to prevent changes in the future.

Third, any serious discussion of school design has to reflect political and economic realities. Recent surveys of public opinion show a renewed commitment to education and a new willingness to invest more in education. However, Americans will sustain their support for education only if school reform, including innovative school design, leads to improved student performance.

By endorsing these school design principles, the Council for Education Facilities Planners International has reaffirmed your serious commitment to our children and your role as leaders in the national school reform effort.

A fuller explanation of these conditions, as well as other recommendations that came out of the June 1998 meeting, can be found at www.edfacilities.org, the National Clearinghouse Educational Facilities web site. At this site, parents, educators, and community members who are interested in school design can view a gallery of school projects nationally recognized for their overall architectural design or a particular design feature. There are also links to the latest research and the current news on school design issues.

Research indicates that the design and condition of school buildings can affect student performance. A New York City study found that students in overcrowded schools scored significantly lower on both math and reading exams than did similar students in less crowded schools. A study of schools in rural Virginia found that student scores on achievement tests were up to 5 percentile points lower in buildings with lower quality ratings, even after adjusting for socioeconomic factors. A study of student performance in schools in California found that test scores are substantially higher in classrooms with plenty of natural light. Earlier studies also suggested that natural light makes students brighter.

The QZAB legislation was a victory for America's students and schools, and there is a good chance that a comprehensive school construction bill will be enacted. With broad-based support for action and a strong national economy, we have the opportunity – and the obligation – to invest in our schools. Plato's words can guide us: "That which is honored in a country is that which will be cultivated there." Let's build our nation's schools so that 50 years from now people will look back and be grateful that we came together to build schools that reflect the high value we place on citizenship, community, and learning for all Americans.

Dick Riley

Richard W. Riley

Richard W. Riley
U.S. Secretary of Education

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CHOOSING WHAT'S BEST FOR YOUR SCHOOL DISTRICT

	PERMISSIBLE USES	ELIGIBILITY	CHARACTERISTICS
QUALIFIED ZONE ACADEMY BONDS	QZAB proceeds may be used for renovating school buildings; purchasing equipment; developing curricula; and training school personnel. Under current law,the proceeds may not be used for construction. *However, the President's proposal would make new construction an allowable activity.*	States allocate bonding authority among schools, which must (1) be located in an empowerment zone or enterprise community or (2) have at least 35 percent of their students eligible for free or reduced-cost lunch.	• Available now. • Helps low-income communities meet their most pressing school renovation needs and other necessary activities such as investing in technology and training teachers. • Requires public-private partnerships.
SCHOOL MODERNIZATION BONDS	*Bond proceeds could be used for school construction and extensive repairs.*	*(1) 40% ($8.8 billion) of the bonding authority would be allocated to the 125 districts with the most children living in poverty; of that, $8.2 billion would go to the 100 largest, and the remaining $600 million would go to the next 25.* *(2) 60% would be allocated to states to distribute according to their priorities.*	• Would help districts accommodate rising enrollments by building new schools. • Would be available to more communities than QZABs.
SCHOOL RENOVATION LOANS	*School renovation and repair projects including roofs, heating and cooling systems, and plumbing*	*Targeted to areas of need.*	• Would help high need school districts meet urgent renovation needs. • Would jump-start renovation.
SCHOOL RENOVATION GRANTS	*Same as above.*	*Targeted to areas of highest need.*	• Same as above. • Would not need to be repaid.

Measures that are proposed but not yet enacted are in italics.

ISSUETRAK is prepared by The Council of Educational Facility Planners International as a service to its membership.

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THE COUNCIL OF EDUCATIONAL FACILITY PLANNERS INTERNATIONAL
9180 E. Desert Cove Dr., Suite 104 Scottsdale, AZ 85260
Phone: 480.391.0840 Fax: 480.391.0940 www.cefpi.org

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